



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|----------------------------|------------------------|
| 10/802,717 | 03/18/2004 | Fumikazu Saito | Q80002 | 5046 |
| 23373 7590 06/16/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037 | | | EXAMINER BLAN, NICOLE R | |
| | | | ART UNIT 1792 | PAPER NUMBER |
| | | | MAIL DATE 06/16/2008 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/802,717

Applicant(s)

SAITO ET AL.

Examiner

NICOLE BLAN

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 7-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 04222008

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 30, 2008 has been entered.

Response to Arguments

2. Applicant's arguments filed May 30, 2008 have been fully considered but they are not persuasive.

In response to the applicant's argument regarding the fixing member, the Examiner respectfully disagrees. The claim requires that the fixing member fixes a pin (which TeleChem teaches) but not that the fixing member itself is fixed. Therefore, TeleChem teaches this limitation.

In response to the applicant's argument that TeleChem does not teach the fixing member being supported above the cleaning solution, the examiner respectfully disagrees. TeleChem teaches in Figures 1-2 that the legs of the support member hold the fixing member above the bottom of the tank. Furthermore, the tank is capable of holding cleaning solution at a lower level than the fixing member. The Examiner is well aware that TeleChem suggests placing a certain amount of solution into the tank to prevent damage; however, this does not take away from the fact that the tank is able to have less than the amount of cleaning solution suggested as taught by

the TeleChem reference. Therefore, TeleChem teaches the supporting member supports the fixing member above the cleaning solution so that a stylus portion of the probe pin is immersed in the cleaning solution.

In response to applicant's argument regarding the newly added limitation, the Examiner finds this unconvincing for the reasons discussed below.

The Examiner has given official notice that it is common knowledge to one of ordinary skill in the art of cleaning that black light can be used to evaluate the cleanliness of products, as referenced by Jackson. Applicant has not timely challenged the official notice, and therefore noticed fact is taken as admitted prior art. Further, such has been demonstrated by the references already of record in the case. See, in particular, those cited in the rejection mailed May 18, 2007. See MPEP 2144.03C.

Claim Rejections - 35 USC § 112

3. Claim 1 recites the limitation "... placed on the bottom of the cleaning container" in line
3. There is insufficient antecedent basis for this limitation in the claim.

Claim Interpretations

4. Applicant uses "means for" language in Claims 1 and 3. These claims were interpreted under 35 USC 112, 6th paragraph. Claim 1 states "...ultrasonic vibration generating means for generating ultrasonic vibrations directed to the cleaning solution in which the stylus portion of the probe pin facing downward is immersed." The source of the "ultrasonic vibrations directed to the cleaning solution in which the stylus portion of the probe pin facing downward is

immersed” of Claim 1 was interpreted as “the ultrasonic vibration generator that is composed of a vibrator that is provided within an internal room formed between the bottom of the cleaning container and the bottom of the external box, and secured to the outer bottom of the cleaning container; and an oscillator that is electrically connected with this vibrator and placed outside the external box” based on page 6, lines 14-20 of specification. Claim 3 states “...an ultraviolet irradiating means for irradiating the stylus portion of the probe pin with ultraviolet rays for detecting the presence or absence of a foreign particle on the portion.” The source of the “...ultraviolet irradiating means for irradiating the stylus portion of the probe pin with ultraviolet rays for detecting the presence or absence of a foreign particle on the portion” of Claim 3 was interpreted as “a black light apparatus” based on page 8, lines 12 and 14-18 of specification.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over TeleChem, in view of Lord (U.S. Patent 4,442,852, hereafter ‘852), and further in view of Ferrell (U.S. Patent 5,505,785, hereafter ‘785).

Claims 1 and 7: TeleChem teaches a fixing member that fixes pins upright [clear plastic center of Figs. 1-2] as well as a supporting member for supporting the fixing member [the white rack, Figs. 1-2] while being cleaned in an ultrasonic machine [Fig. 2] in which the stylus portion

of the probe pin is immersed in the cleaning solution [Fig. 2]. Figures 1-2 show that the legs of the support member hold the fixing member above the bottom of the tank. Furthermore, the tank is capable of holding cleaning solution at a lower level than the fixing member. Therefore, TeleChem teaches the supporting member supports the fixing member above the cleaning solution so that a stylus portion of the probe pin is immersed in the cleaning solution as well as placing a supporting member on the bottom of the cleaning container because the legs of the support member can rest on the bottom of the container.

It does not teach a cleaning container for containing cleaning solution or that the ultrasonic vibration generator that is composed of a vibrator that is provided within an internal room formed between the bottom of the cleaning container and the bottom of the external box, and secured to the outer bottom of the cleaning container; and an oscillator that is electrically connected with this vibrator and placed outside the external box. However, '852 teaches a cleaning container [(20), Fig. 1, col. 3, lines 15-19] for containing a cleaning solution [(30), Fig. 1, col. 3, line 27]. It also teaches that the cleaning container is an ultrasonic cleaner [abstract, (10), Fig. 1, col. 3, line 9] that contains a vibrator [(24), Fig. 1] provided within an internal room [the cabinet is (12), Fig. 1, col. 3, line 10, and the cutaway reveal the vibrator in an internal room] formed between the bottom of the cleaning container [col. 3, lines 19-23] and the bottom of the external box [(18) references the feet on which the bottom of the cabinet or external box rests, Fig. 1], and secured to the outer bottom of the cleaning container for increasing the cleaning performed [col. 3, lines 23-30]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ultrasonic cleaner of '852 as the cleaner of TeleChem because '852 teaches that it increases the cleaning performed.

They do not teach that the oscillator that is electrically connected with this vibrator and placed outside the external box. However, '785 teaches an oscillator [(610), Fig. 6, 610 is the ultrasonic generator that include a frequency modulation capability] connected to the vibrators [(606 and 608), Fig. 6] and located outside of the external box [col. 9, lines 57-67] that prevents the formation of standing waves in turn preventing damage to the wafers being cleaned. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the oscillator of '785 as the oscillator in the cleaning device of TeleChem because '785 teaches that it is able to prevent damage from occurring by preventing the formation of standing waves.

Claims 2 and 8: TeleChem, '852, and '785 teach the limitations of claims 1 and 7, respectively, above. They do not teach that cleaning solution includes ethyl alcohol. However, '135 teaches that the cleaning solution includes ethyl alcohol [col. 1, lines 61-65; col. 2, lines 2-5]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the cleaning solution of '135 as the cleaning solution of TeleChem because '135 teaches that it is a suitable cleaning solution for use in an ultrasonic device for materials made of metal [col. 4, lines 47-54].

7. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over TeleChem, '852, and '785 as applied to claim 2 above, and further in view of Jackson.

Claims 3 and 9; TeleChem, '852, '785, and '135 teach the limitations of claims 2 and 8, respectively, above. They do not teach an ultraviolet irradiating means (i.e. a black light). The Examiner takes Official Notice that is common knowledge to one of ordinary skill in the art of cleaning that a black light can be used to evaluate the cleanliness of products. See for example, Jackson, where black light inspection techniques have been used to evaluate cleaned products [e.g. electronic] [page 233, Application and Performance]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the black light of Jackson to inspect the cleanliness of the TeleChem apparatus because Jackson teaches that it is a suitable means for evaluating cleaned products.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE BLAN whose telephone number is (571)270-1838. The examiner can normally be reached on Monday - Thursday 8-5 and alternating Fridays 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. B./
Examiner, Art Unit 1792

/Michael Cleveland/
Supervisory Patent Examiner, Art Unit 1792